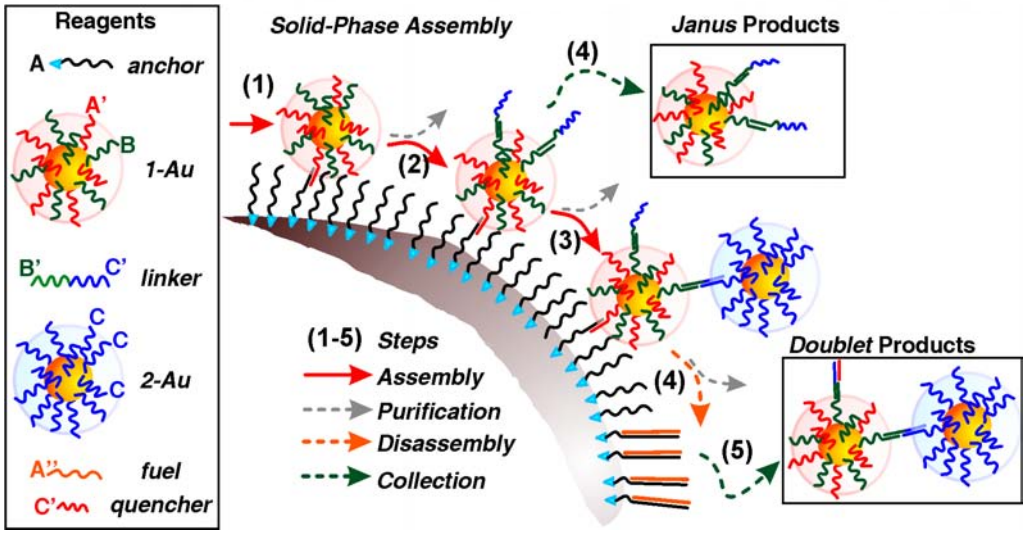
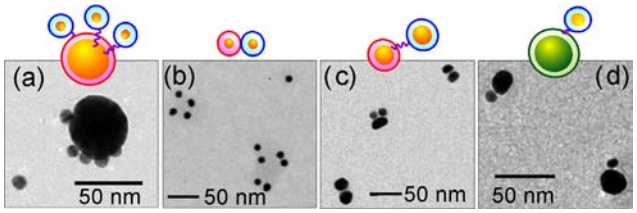
Generation of Janus-Type Nanoparticles

Technology

Describes an approach to assemble nanomaterials at a colloidal substrate in a layer by layer fashion with biomolecules governing the interaction between the layers. This biomolecule-driven nano-assembly platform using encoded solid supports helps the construction of modular nanosystems with complex architectures. In addition, the proposed approach allows fabrication of Janus-type constructions.





Applications

Generation of a broad range of nanoparticle monomers with controlled anisotropy which can be used in a number of applications including targeted drug delivery, microsensor systems, stabilizers of complex media, and nanocomponents in smart displays.

Competitive Advantage

The system is simple, modular and allows high throughput fabrication. The assembly is economical and can be performed in aqueous solution without strenuous environmental controls and laborious purification steps.

Inventors

Mathew M. Maye
Dmytro Nykypanchuk
Daniel van der Lelie
Oleg Gang

License Status

Available for Licensing
- Non-Exclusive
- Exclusive

Patent Status

Application Filed
61/044,224

Brookhaven National Laboratory

Kimberley Elcess
Office of Intellectual Property and Sponsored Research

PO Box 5000
Building 185
Upton, NY
11973-5000

Phone:
(631) 344-4151

Fax:
(631) 344-3729

Email address:
elcess@bnl.gov

BROOKHAVEN NATIONAL LABORATORY